AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-037

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-037.01
SKN Results

AMSAT News Service Bulletin 037.01
  From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.01

Many thanks to all who participated in AMSAT's Straight Key Night on OSCAR 2011, this year's event held in memory of Dick Peacock, W2GFF. Despite the frequent necessary power-management shut-downs of AO-51, activity was generally good, with AO-7, FO-29 and VO-52 picking up the load. A big "Well Done!" to all of the command stations.

The following participants each received one or more "Best Fist" nominations:

AA5PK, JH7UJI, JM1SBU, JR0EFE, K9CIS, N1AIA, N4ZQ,
N5AFV, N9AMW, ON5NY, PR7VX, PU4RON, VA7MG, W9EN,
WA5KBH, WB2SIH, WC7V, WD9EWK, 9A2EY

As can be seen from the list, from its very modest, informal beginnings on the North American east coast AMSAT net in the 1970s, SKN on OSCAR is now a worldwideevent. Long may it continue, and we hope to see you next year!

73,
Ray, W2RS

[ANS thanks Ray, W2RS, for the above information]

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SB SAT @ AMSAT $ANS-037.02
ARISSat-1 Update

AMSAT News Service Bulletin 037.02
  From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.02

The ARISSat team is anxiously awaiting the deployment of ARISSat-1 from the ISS during an EVA on 16 Feb 2011. NASA will cover the EVA on NASA Select TV. We don't have a final time during the EVA when the deployment task will occur. We are continuing to work on the arissat1.org site and adding information, people can also follow on Twitter @Arissat1.

[ANS thanks Gould, WA4SXM, for the above information]

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SB SAT @ AMSAT $ANS-037.03
UO-11 Report

AMSAT News Service Bulletin 037.03
  From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.03

OSCAR-11 REPORT   31 January 2011

This report covers the period from 31 December 2010 to 31 January 2011. During this time the satellite has been heard from 31 December 2010 to 10 January 2011, and from 21 January to 30 January . It is expected to switch-on again 10 February for ten days, and remain silent for the remainder of the month.

Excellent signals have been reported from stations located around the world, and good copy obtained from decoded telemetry frames.

The satellite is now transmitting during eclipses, although signals are weaker at those times. This indicates that there is still some capacity remaining in the battery.

The on-board clock is now very stable. It gained eight seconds during January.

The VHF beacon frequency is 145.826 MHz. AFSK FM ASCII Telemetry

Reception reports have been received from Christian SWL-CHMY, Mike DK3WN, Campo PY5JAP, Ron WB0SOK and Horatio CX8AF. Many thanks for those and to everyone who posted reports on the satellite status website.

At the present time, while OSCAR-11 is operating in a predictable way, I no longer need direct reports or files by e-mail. However, could all listeners continue to enter their reports on the general satellite status website. This is a very convenient and easy to use facility, which shows the current status of all the amateur satellites, and is of use to everyone. Reports around the expected times of switch-on and

switch-off are of special interest, especially for times 12:00 - 17:00
and 22:00 - 07:00 UTC, to when the satellite is out-of-range in the UK.
The URL is http://oscar.dcarr.org/index.php

A longer version of this report report is available on my website, and
new listeners to OSCAR-11 should read this for further information. The
URL is http://www.g3cwv.co.uk/oscar11.htm. This page contains a links
to the longer report, a short audio clip to help you identify the sat-
ellite and a file of the last telemetry received. The website also con-
tains an archive of news & telemetry data which is updated from time to
time, and details about using a soundcard or hardware demodulators for
data capture. There is also software for capturing data, and decoding
ASCII telemetry.

If you place this bulletin on a terrestrial packet network, please use
the bulletin identifier $BID:U2RPT153.CWV, to prevent duplication.

73 Clive G3CWV   xxxxx@amsat.org (please replace the x's by g3cwv)

[ANS thanks Clive, G3CWV, for the above information]

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SB SAT @ AMSAT $ANS-037.04
AMSAT-DC Spring-Summer Workshop in planning

AMSAT News Service Bulletin 037.04
  From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.04

AMSAT Maryland-DC Area Coordinator Pat Kilroy, N8PK invites East
Coast satellite operators to participate with him to plan, organize
and conduct the 2011 AMSAT-DC Spring (or summer) Workshop. Pat says
the focus of the event will be To BUILD AND TEST something.

"Something" may include a PICetSat II flight module, a SoftRock SDR
project, SDR Cube transceiver, a photovoltaic system battery charging
regulator deep-cycle 90AH batteries, and the door is open for more
suggestions.

Such a workshop for any of these projects will take nearly a whole
day on which to make good progress. Pat is looking for a free or low
cost meeting place. The free facility at Goddard Space Flight Center
in Greenbelt, Maryland is availble subject security screening such as
at the last Workshop.

Pat needs to know if there is enough interest? PLEASE RESPOND soon,
by Tuesday, February 7, 5 PM, to amsat-dc@amsat.org list (preferred)
or privately to Pat at n8pk@amsat.org. Pat hopes to hear from a great
team of volunteers! Please pass the word!

[ANS thanks AMSAT Maryland-DC Area Coordinator Pat Kilroy, N8PK for
 the above information]

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SB SAT @ AMSAT $ANS-037.05
2 Notes from SA AMSAT

AMSAT News Service Bulletin 037.05

From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.05

SA AMSAT Announces SAiSAT A Journey Into Tomorrow

This week SA AMSAT announced two new satellite initiatives. The first is a long-term research and development project called SAiSAT.

The Southern Africa Amateur Radio Satellite Association (SA AMSAT) which is affiliated to other AMSAT groups around the world is proposing an exciting satellite project and is inviting the participation of South African Universities and Universities of Technology in the development and construction of a completely South African Amateur Radio experimental satellite.

The objective of this satellite is to demonstrate South Africa's ability to engineer a satellite, employing the latest technology, and new innovations. In addition to some feasibility projects for future commercial use. The aim of the project is to contribute to propelling South Africa into a world position as a technology resource.

SAiSAT is based on the CubeSat satellite design. SAiSAT plans to use fold out panel a total of 24 in all that support solar panel steering in order to capture the maximum energy available from the sun. The rear of the solar panels is free for project use. They have the potential to house 24 projects depending on size.

An additional research proposal is that the outer rim of each panel is fitted with pcb tracks in the form of a coil:
+ To generate additional power from the Earth's magnetic field.
+ To torque stabilise the satellite against the Earths magnetic field.
+ To give orientation data to resolve the attitude of the satellite.
+ Take additional unused power from the batteries and elevate the satellite into an every increasing orbit thus extending its usefulness and orbital life.
+ Possible to create an 12 antenna arrary
  * Provide a steerable antenna array with gain, thus reducing the necessary radio frequency power needed to maintain contact with earth.
  * Provide a radio Doppler system on board so the satellite can confirm and report position, and supply the radial of interfering emissions.
  * Provide a vital radio redundancy feature from antenna failure.
  * Provide static charge data.
  * Provide residual atmospheric density readings

SA AMSAT has issued an open invitation to tertiary institutions and individuals to participate in the project. A project meeting is scheduled on Friday 25 March ahead of the annual Space Symposium which will take place the next day. Full details are posted at: http://www.amsatsa.org.za/SAiSAT.htm

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SA AMSAT Announces Kletskous Amateur Radio Satellite Project

Project Manager Hannes Coetzee, ZS6BZP invites amateur satellite operators world-wide to monitor the SA AMSAT web page for project plans of the Kletskous satellite. (http://www.amsatsa.org.za)

Kletskous is a hands-on CubeSat aimed at promoting greater involve-

ment in satellite activity by South African Radio Amateurs. The first draft of a project plan will be available soon on the SA AMSAT web. Regular updates will be posted as the project develops.

Hannes is inviting interested persons to join the team. "We are particularly looking for radio amateurs with RF design experience, antenna design experience and software writing experience. Send your contact details and a short description of you technical background to saamsat@intekom.co.za.

[ANS thanks SA AMSAT and Hannes Coetzee, ZS6BZP for the above information]

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SB SAT @ AMSAT $ANS-037.06
ARRL Announces Teachers Institute TI-2 Space Curriculum

AMSAT News Service Bulletin 037.06
  From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.06

ARRL Announces Teachers Institute TI-2 Space Curriculum

The ARRL Education Services Department has announced the 2011 schedule for the Teachers Institute on Wireless Technology (TI) workshop.

Offered through the ARRL's Education & Technology Program, the Teachers Institute is a four-day, expenses paid, in-residence learning opportunity designed for motivated teachers and other school staff who want to learn more about wireless technology and bring that knowledge to their students.

A variety of topics are covered during the TI, including basic wireless technology literacy, electronics, the science of radio, radio astronomy, how to bring space into the classroom, ham radio operation, introduction to microcontrollers and basic robotics. While participants do not need to have an Amateur Radio license to attend the basic TI sessions, one is required for the advanced (TI-2) session.

TI-2 Space is sponsored by the Dayton Amateur Radio Association. The TI-2 Space curriculum focuses on the nuts and bolts of setting up and operating a satellite ground station. This serves as excellent preparation for a scheduled contact with the ISS through the Amateur Radio on the International Space Station (ARISS) program. But it also provides instruction for continued use of satellites and other man made space assets to explore naturally generated signals, space and a variety of topics. Dates of the Institute are July 11-14, 2011. The application deadline is May 15, 2011.

The course will be 4 days: the first half will be setting up and learning to operate the ground station, the second half will be practice making satellite contacts and instruction in using space borne assets in the classroom. Participants will receive all the equipment necessary to set up a basic satellite ground station. They will participate in an antenna building party (an activity they can duplicate back home with their students).

Though participants need not hold an amateur radio license to enroll

in all other sessions of the TI, to be considered for a seat in TI-2 Space, participants must possess at least a Technician class license at the time of application. Priority for attending the TI-2 Space session will first be given to teachers who are signed up for an ARISS contact; second, to TI graduate teachers who have completed an ARISS contact; third to TI graduates who want to learn more about bringing space related activities into their classrooms.

This session has a class limit of 8 participants, so apply early! Full information and applications are on-line at: http://www.arrl.org/ti-2-space-in-the-classroom

[ANS thanks the ARRL for the above information]

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SB SAT @ AMSAT $ANS-037.07
Codec2 Alpha Release Demonstration

AMSAT News Service Bulletin 037.07
From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.07

If you attended the 2010 AMSAT Space Symposium you heard the talk by Bruce Perens, K6BP about the Codec2 Project, the open-source, low-bit rate voice codec that is being led by David Rowe VK5DGR.

Bruce, VE9QRP recently completed an internet bitstream concact with Paul, ZL3IN using an alpha-level release of Codec2. Bruce made a video of the conversation using the actual audio of the digital audio. You are invited to view/listen to the Codec2 demonstration at: http://www.youtube.com/watch?v=nhHE6CrI

This demonstration is running at 2500 bps. Bruce wrote, "We're aiming for 2400 bps with Forward Error Correction, it could make satellite voice communication comprise a smaller bandwidth, offering less demanding downlink systems. Because it is open source, the codec could even be implemented in the satellite, perhaps to provide voice-encoded telemetry for a FUNcube-like project of the future."

The Codec2 site is http://www.rowetel.com/blog/?page_idE2

The source files of Bruce's conversation with ZL3IN, and many ancillary Codec2 materials are available on his blog: http://ve9qrp.blogspot.com

[ANS thanks Bruce, VE9QRP for the above information]

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SB SAT @ AMSAT $ANS-037.08
ARISS Status - 31 January 2011

AMSAT News Service Bulletin 037.08
From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.08

Amateur Radio on the International Space Station (ARISS) Status Report
January 31, 2011

1. Upcoming School Contacts

An Amateur Radio on the International Space Station (ARISS) contact scheduled for Arsaniq School in Kangiqsujuaq, Wakeham Bay, Quebec, Canada on Monday, January 31 at 19:26 UTC was successful via tele-bridge station LU8YY in Argentina will handle the radio connection. Students have learned about the ISS through videos, the internet and guest speakers.

Coll�ge Joseph Chassigneux, located in Vinay, France, was completed on Tuesday, February 1 at 07:02 UTC. Through this activity, teachers hope to expose students from mostly rural villages to the outside world. In French class, students have written articles for the school magazine about life on the ISS as well as items about their prepara-tions for the radio contact. They have learned technical terms in Eng-lish, built CW circuits in Physics and have studied continents and countries in Geography. Amateur radio operators plan to discuss the technical aspects of the contact with the youth.

An Amateur Radio on the International Space Station (ARISS) contact was completed with Buehl-Realschule Dornstadt in Dornstadt, Germany on Wednesday, February 2 at 07:32 UTC. Students have been introduced to wireless technology and have participated in related hands-on act-ivities. In addition, workshops have been planned which will teach about the challenges faced in space travel.

An Amateur Radio on the International Space Station (ARISS) contact was scheduled and completed for Adobe Bluffs Elementary School, San Diego, California on Thursday, February 3 at 17:12 UTC. Through pro-jects and hands on activities, students have been learning about electromagnetic waves, astronomy and other space-related topics.

2. Paolo Nespoli Speaks with Marco da Melo Students via ARISS

Istituto Comprensivo "Marco da Melo" in Mel, Belluno, Italy took part in an Amateur Radio on the International Space Station (ARISS) contact on Tuesday, January 25. Astronaut Paolo Nespoli, IZ0JPA answered the students' 21 questions over two ISS passes and exchanged greetings with the audience. Nearly 250 students, teachers and visitors were in attendance for the contact. Regional television RAI and local media and newspapers covered the event. Video streamed over the internet received over 50 connections. The ARISS contact was the featured event of a curriculum covering telecommunications, electrophysics and tele-graphy.

3. Successful ARISS Contact with Polish School

On Wednesday, January 26, astronaut Cady Coleman, KC5ZTH participated in an Amateur Radio on the International Space Station (ARISS) contact with students, ages 15 - 18, from Liceum Ogolnoksztalcace Nr I im Stanislawa Staszica in Ostrowiec Swietokrzyski, Poland. Coleman answered

20 space-related questions

posed to her by the youth. Approximately 150 students, teachers and guests were on hand for this event which was covered by several media outlets. In addition to the required science curriculum, the school sponsors astronomy and amateur radio clubs as well as featured activities
such as this ARISS contact, in order to stimulate students' scientific interests.

4. Nelson County Area Technology Center Sponsors ARISS Contact

On Friday, January 28, on-orbit astronaut Cady Coleman, KC5ZTH took part in an Amateur Radio on the International Space Station (ARISS) contact with Foster Heights Elementary School students in Bardstown, Kentucky. Nelson County Area Technology Center students operated the amateur radio equipment during the pass during which Coleman answered 16 questions. An audience of approximately 100 people attended the event, including a representative from the Kentucky Department of Education. Television stations and newspapers covered the contact. To view the Kentucky Standard article, go to: http://www.kystandard.com/content/foster-heights-students-use-amateur-radio-speak-astronaut

5. Civitavecchia, Italy Students Radio ISS

The primary school "Alessandro Cialdi" in Civitavecchia, Italy participated in an Amateur Radio on the International Space Station (ARISS) contact on Saturday, January 29. ESA astronaut Paolo Nespoli, IZ0JPA answered 17 questions posed by the students from "Autorit Portuale" in Civitavecchia (Port authority of Rome) where an audience of nearly 200 students, teachers, visitors and media gathered for the contact. Before the ISS call, ARISS mentor Francesco De Paolis, IK0WGF introduced the event with a presentation on the ARISS program. Regional and local media and newspapers covered the event and the video, streamed on the internet by AMSAT-Italia, received 60 connections.

6. AMSAT - ARISSat-1 Delivered to the ISS

On January 27, ARISSat-1 was launched on Progress 41P and arrived at the ISS on Saturday, January 29. The satellite is expected to be deployed during a Russian EVA on February 16. The January 30 AMSAT (Radio Amateur Satellite Corporation) News Service bulletin (ANS-030) included an update on ARISSat-1. "ARISSat-1 Arrives at the International

Space Station" may be found at: http://amsat.org/pipermail/ans/2011/000482.html

The AMSAT Web site has also been revised to include the latest information on ARISSat-1 with links to several news stories covering the satellite. See: http://www.amsat.org/amsat-new/index.php

7. ARRL Story on ARISSat-1 Launch

The American Radio Relay League (ARRL) ran an item on the launch of ARISSat-1 aboard Progress 41P. See: http://www.arrl.org/news/arissat-1-blasts-off

8. Amateur Radio Newsline Covers ARISS

On January 28, the Amateur Radio Newsline Report 1746 posted an item, "ARISSat-1 Set for Trip to the ISS" under its heading Ham Radio in Space. See: ftp://ftp.arnewsline.org/quincy/News/news.txt

[ANS thanks Carol, KB3LKI, for the above information]

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SB SAT @ AMSAT $ANS-037.09
AMSAT Will Be at the Orlando Hamcation February 11-13

AMSAT News Service Bulletin 037.09

From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.09

AMSAT VP Operations Drew Glasbrenner, KO4MA reminds everyone that the Orlando Hamcation is just a week away, and AMSAT will be there in force. Here are the details of the hamfest ...

Orlando HamCation 2011
February 11, 12, 13
Central Florida Fairgrounds
Orlando, Florida 32808
Friday: Noon to 6pm
Saturday: 9am to 5pm
Sunday: 9am to 2pm

AMSAT has a forum scheduled Saturday from 1:45 to 3:15, and this year it is INSIDE! ARISSat-1 will be one of the main topic of discussion. The ARISSat-1 engineering model will be on display, and on the air. Drew will have a FUNcube Dongle Pro on display and in use. Tune your HT to 145.950 MHz to copy the FM downlink transmitting live from the hamfest.

AMSAT will also have live satellite demonstrations, ranging from simple handheld/portable operations, to fully automated systems.

Drew is also planning on having materials on hand for new members to build their own CJU 435 MHz antenna, for free as incentive to join and support AMSAT.

To make this all happen, we need your help. Orlando has become AMSAT's busiest hamfest behind Dayton, and we need current members to assist in the booth. If you can help answer questions and talk up the amateur satellite program, please consider putting in a few hours behind the table. Drop Drew an email at ko4ma@amsat.org, and let him know when you can come by and help out!

[ANS thanks Drew Glasbrenner, KO4MA for the above information]

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SB SAT @ AMSAT $ANS-037.10
ARISSat-1 QSL Manager Volunteer Request

AMSAT News Service Bulletin 037.10
From AMSAT HQ SILVER SPRING, MD.
February 6, 2011
To All RADIO AMATEURS
BID: $ANS-037.10

The ARISSat-1 team is looking for volunteers to manage the QSL operations for ARISSat-1. There will be recognitions for voice, CW, SSTV, telemetry and Secret Word reception reports. We expect to have participation from many students and classes worldwide. Please contact Gould at wa4sxm at amsat dot org if you can help us with this part of the project.

[ANS thanks Gould, WA4SXM, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's

Club. Members of the President's Club, as sustaining donors to AMSAT
Project
Funds, will be eligible to receive additional benefits. Application
forms
are
available from the AMSAT Office.

73,
This week's ANS Editor,
Dee Interdonato, NB2F